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ABSTRACT OF THE DISCLOSURE

A programmable frequency divider capable of a 50% duty cycle at odd and even integer division ratios. In one embodiment, the frequency divider is configured to produce an output signal having a period equal to a division ratio N times a period of a clock signal, and the division number N is a programmable variable which bears the following relationship to the number F of required storage elements:

$$F = \frac{N+P}{2}, \text{ where P is 1 if the division ratio is odd,}$$

and 0 if the division ratio is even.

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